



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2019-0596; Project Identifier 2019-NE-22-AD; Amendment 39-21101; AD 2020-04-01]**

**RIN 2120-AA64**

**Airworthiness Directives; Pratt & Whitney Turbofan Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for all Pratt & Whitney (PW) PW1519G, PW1521G, PW1521GA, PW1524G, PW1525G, PW1521G-3, PW1524G-3, PW1525G-3, PW1919G, PW1921G, PW1922G, PW1923G, and PW1923G-A model turbofan engines. This AD was prompted by reports of in-flight shutdowns due to oil leaking from the connection between the LP10 oil supply tube and the fuel oil cooler (FOC). This AD requires initial and repetitive gap inspections of the LP10 oil supply tube and the FOC and, if a gap is found, replacement of these parts. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact Pratt & Whitney, 400 Main Street, East Hartford, CT, 06118; phone: 800-565-0140; fax: 860-565-5442; email: [help24@pw.utc.com](mailto:help24@pw.utc.com); Internet: <http://fleetcare.pw.utc.com>. You may view this service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this

material at the FAA, call 781-238-7759. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0596.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0596; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Kevin M. Clark, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7088; fax: 781-238-7199; email: [kevin.m.clark@faa.gov](mailto:kevin.m.clark@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all PW PW1519G, PW1521G, PW1521GA, PW1524G, PW1525G, PW1521G-3, PW1524G-3, PW1525G-3, PW1919G, PW1921G, PW1922G, PW1923G, and PW1923G-A model turbofan engines. The NPRM published in the Federal Register on September 10, 2019 (84 FR 47455). The NPRM was prompted by reports of in-flight shutdowns due to oil leaking from the connection between the LP10 oil supply tube and the FOC. The NPRM proposed to require initial and repetitive gap inspections of the LP10 oil supply tube and the FOC and, if a gap is found, replacement of these parts. This AD further requires removal of these parts at the next engine shop visit. The FAA is issuing this AD to address the unsafe condition on these products.

## **Comments**

The FAA gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA's response to each comment.

### **Request to Correct Service Bulletin (SB) References**

The European Union Aviation Safety Agency (EASA) commented that the PW SBs referenced in the NPRM are missing the letter "G" and requested that these references be corrected. EASA added that it might be useful to specify the PW SB PW1000G-A-79-00-0011-00A-930A-D is at Issue No: 6. EASA also requested that the FAA place copies of the referenced SBs in the docket to facilitate review of the NPRM.

The FAA agrees to revise the SB references as requested by EASA. The FAA placed the referenced SBs in the docket.

### **Request to Revise Compliance**

Swiss International Air Lines Ltd. (Swiss Air) requested that the FAA add to paragraph (i) of this AD that inspections performed prior to the effective date of this AD and done in accordance with PW SB PW1000G-A-79-00-0012-00A-930A-D, dated January 25, 2019, are considered as initial compliance per paragraph (g) of this AD. Swiss Air explained that this change would allow operators to continue with the already ongoing inspection campaign. Otherwise, according to Swiss Air, an engine inspected the day before the AD becomes effective will require a new inspection within 300 engine flight cycles. This places an extra burden on operators with no significant benefit to safety.

The FAA disagrees with revising paragraph (i) of this AD because inspections performed in accordance with the referenced PW SB meet the requirements of paragraph (g) of this AD. In addition, per paragraph (f) of this AD, inspections completed in accordance with this AD before its effective date meet the requirement of "already done."

## **Support for the NPRM**

The Air Line Pilots Association International expressed support for the NPRM as written.

## **Conclusion**

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the changes described previously and minor editorial changes. The FAA determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

The FAA also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

## **Related Service Information**

The FAA reviewed PW SB PW SB PW1000G-A-79-00-0004-00B-930A-D, Issue No: 6, dated March 20, 2019, and PW SB PW1000G-A-79-00-0011-00A-930A-D, Issue No: 6, dated March 20, 2019. PW SB PW1000G-A-79-00-0004-00B-930A-D describes procedures for modification or replacement of the FOC on PW1919G, PW1921G, PW1922G, PW1923G, and PW1923G-A model turbofan engines. PW SB PW1000G-A-79-00-0011-00A-930A-D describes procedures for modification or replacement of the FOCs on PW1519G, PW1521G, PW1521GA, PW1521G-3, PW1524G, PW1524G-3, PW1525G, and PW1525G-3 model turbofan engines.

The FAA also reviewed PW SB PW SB PW1000G-A-79-00-0005-00B-930A-D, Issue No: 3, dated January 25, 2019; PW SB PW1000G-A-79-00-0012-00A-930A-D, Issue No: 3, dated January 25, 2019; PW SB PW1000G-A-79-00-0007-00B-930A-D,

Issue No: 001, dated March 29, 2019, and PW SB PW1000G-A-79-00-0013-00A-930A-D, Issue No: 001, dated March 29, 2019. These SBs describe procedures for inspections of the FOC for gaps as well as replacement of the FOC and the LP10 oil supply tube to prevent oil leaks.

**Costs of Compliance**

The FAA estimates that this AD affects 18 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

**Estimated costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Perform gap inspection	2 work-hours X \$85 per hour = \$170	\$0	\$170	\$3,060
Replace FOC	5 work-hours X \$85 per hour = \$425	\$69,000	\$69,425	\$1,249,650
Replace LP 10 line	2.5 work-hours X \$85 per hour = \$212.50	\$1,125	\$1,337.50	\$24,075

**Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds

necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**2020-04-01 Pratt & Whitney: Amendment 39-21101; Docket No. FAA-2019-0596; Project Identifier 2019-NE-22-AD.**

**(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Pratt & Whitney (PW) PW1519G, PW1521G, PW1521GA, PW1524G, PW1525G, PW1521G-3, PW1524G-3, PW1525G-3, PW1919G, PW1921G, PW1922G, PW1923G, and PW1923G-A model turbofan engines.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7261, Turbine Engine Oil System.

**(e) Unsafe Condition**

This AD was prompted by reports of two in-flight shutdowns due to oil leaking from the connection between the LP10 oil supply tube and the fuel oil cooler (FOC). The FAA is issuing this AD to prevent failure of the LP10 oil supply tube, engine fire and damage to the airplane. The unsafe condition, if not addressed, could result in engine fire and damage to the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

(1) Within 300 engine cycles from the effective date of this AD, perform an initial gap inspection with a 0.001 inch feeler gauge between the LP10 oil supply tube, part number (P/N) 5312624-01, and the FOC, P/N 5306769.

(i) If any gap is found, remove the LP10 oil supply tube and the FOC and replace with parts eligible for installation prior to further flight.

(ii) If no gap is found, repeat this inspection every 850 engine cycles since the previous inspection.

(2) At the next shop visit after the effective date of this AD, remove the LP10 oil supply tube, P/N 5312624-01, and the FOC, P/N 5306769, and replace with parts eligible for installation.

**(h) Terminating Action**

Removal of the affected LP10 oil supply tube and the FOC per the requirements of paragraphs (g)(1)(i) or (g)(2) of this AD constitutes terminating action for the inspections required by paragraph (g)(1) of this AD.

**(i) Definition**

(1) For the purpose of this AD, an “engine shop visit” is the induction of an engine into the shop for maintenance involving the separation of pairs of major mating engine case flanges, except separation of engine flanges solely for the purposes of transportation of the engine without subsequent maintenance does not constitute an engine shop visit.

(2) For the purpose of this AD, an LP10 tube eligible for installation is any LP10 tube with a P/N other than P/N 5312624-01.

(3) For the purpose of this AD, an FOC eligible for installation is one with a P/N other than P/N 5306769 or an FOC modified per PW SB PW1000G-A-79-00-0004-00B-

930A-D or PW SB PW1000G-A-79-00-0011-00A-930A-D, both Issue No: 006, and both dated March 20, 2019.

**(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k) of this AD. You may email your request to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(k) Related Information**

For more information about this AD, contact Kevin M. Clark, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7088; fax: 781-238-7199; email: kevin.m.clark@faa.gov.

**(l) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on February 13, 2020.

Robert J. Ganley,  
Manager, Engine and Propeller Standards Branch,  
Aircraft Certification Service.

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